

1

SEQUENCE LISTING

<110> Deisher, Theresa A.
Conklin, Darrell C.
Raymond, Fenella
Bukowski, Thomas R.
Holderman, Susan D.
Hansen, Birgit
Sheppard, Paul O.

<120> POLYPEPTIDES ENCODING FGF HOMOLOGS

<130> 96-20D2

<160> 36

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 917

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)...(621)

<400> 1

atg tat tca gcg ccc tcc gcc tgc act tgc ctg tgt tta cac ttc ctg	48
Met Tyr Ser Ala Pro Ser Ala Cys Thr Cys Leu Cys Leu His Phe Leu	
1 5 10 15	
ctg ctg tgc ttc cag gta cag gtg ctg gtt gcc gag gag aac gtg gac	96
Leu Leu Cys Phe Gln Val Gln Val Leu Val Ala Glu Glu Asn Val Asp	
20 25 30	
ttc cgc atc cac gtg gag aac cag acg cgg gct cgg gac gat gtg agc	144
Phe Arg Ile His Val Glu Asn Gln Thr Arg Ala Arg Asp Asp Val Ser	
35 40 45	
cgt aag cag ctg cgg ctg tac cag ctc tac agc cgg acc agt ggg aaa	192
Arg Lys Gln Leu Arg Leu Tyr Gln Leu Tyr Ser Arg Thr Ser Gly Lys	
50 55 60	
cac atc cag gtc ctg ggc cgc agg atc agt gcc cgc ggc gag gat ggg	240
His Ile Gln Val Leu Gly Arg Arg Ile Ser Ala Arg Gly Glu Asp Gly	
65 70 75 80	
gac aag tat gcc cag ctc cta gtg gag aca gac acc ttc ggt agt caa	288
Asp Lys Tyr Ala Gln Leu Leu Val Glu Thr Asp Thr Phe Gly Ser Gln	
85 90 95	
gtc cgg atc aag ggc aag gag acg gaa ttc tac ctg tgc atg aac cgc	336
Val Arg Ile Lys Gly Lys Glu Thr Glu Phe Tyr Leu Cys Met Asn Arg	
100 105 110	

2

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aaa ggc aag ctc gtg ggg aa, ccc gat ggc acc agc aag gag tgt gtg      384
Lys Gly 115 Lys Leu Val Gly Lys 120 Pro Asp Gly Thr Ser Lys Glu Cys Val 125

ttc atc gag aag gtt ctg gag aac aac tac acg gcc ctg atg tct gct      432
Phe Ile Glu Lys Val Leu Glu Asn Asn Tyr Thr Ala Leu Met Ser Ala 140
130 135 140

aag tac tcc ggc tgg tac gtg ggc ttc acc aag aag ggg cgg ccg cgg      480
Lys Tyr Ser Gly Trp Tyr Val Gly Phe Thr Lys Lys Gly Arg Pro Arg 160
145 150 155 160

aag ggc ccc aag acc cgg gag aac cag cag gac gtg cat ttc atg aag      528
Lys Gly Pro Lys Thr Arg Glu Asn Gln Gln Asp Val His Phe Met Lys 175
165 170 175

cgc tac ccc aag ggg cag ccg gag ctt cag aag ccc ttc aag tac acg      576
Arg Tyr Pro Lys Gly Gln Pro Glu Leu Gln Lys Pro Phe Lys Tyr Thr 190
180 185 190

acg gtg acc aag agg tcc cgt cgg atc cgg ccc aca cac cct gcc      621
Thr Val Thr Lys Arg Ser Arg Ile Arg Pro Thr His Pro Ala 205
195 200 205

tagggccacc cgcgcgggcc ctcagggtcgc cctggccaca ctcacactcc cagaaaactg      681
catcagagga atatttttac atgaaaaata aggattttat tgttgacttg aaacccocga      741
tgacaaaaga ctcacgcaaa gggactgtag tcaacccaca ggtgcttgtc tctctctagg      801
aacagacaac tctaaactcg tocccagagg aggacttgaa tgaggaaacc aacactttga      861
gaaaccaaag tcctttttcc caaagggttct gaaaaaaaaa aaaaaaaaaa ctcgag      917

<210> 2
<211> 207
<212> PRT
<213> Homo sapiens

<400> 2
Met Tyr Ser Ala Pro Ser Ala Cys Thr Cys Leu Cys Leu His Phe Leu
1 5 10 15
Leu Leu Cys Phe Gln Val Gln Val Leu Val Ala Glu Glu Asn Val Asp
20 25 30
Phe Arg Ile His Val Glu Asn Gln Thr Arg Ala Arg Asp Asp Val Ser
35 40 45
Arg Lys Gln Leu Arg Leu Tyr Gln Leu Tyr Ser Arg Thr Ser Gly Lys
50 55 60
His Ile Gln Val Leu Gly Arg Arg Ile Ser Ala Arg Gly Glu Asp Gly
65 70 75 80
Asp Lys Tyr Ala Gln Leu Leu Val Glu Thr Asp Thr Phe Gly Ser Gln
85 90 95
Val Arg Ile Lys Gly Lys Glu Thr Glu Phe Tyr Leu Cys Met Asn Arg
100 105 110
Lys Gly Lys Leu Val Gly Lys Pro Asp Gly Thr Ser Lys Glu Cys Val
115 120 125
Phe Ile Glu Lys Val Leu Glu Asn Asn Tyr Thr Ala Leu Met Ser Ala
130 135 140
Lys Tyr Ser Gly Trp Tyr Val Gly Phe Thr Lys Lys Gly Arg Pro Arg
145 150 155 160
Lys Gly Pro Lys Thr Arg Glu Asn Gln Gln Asp Val His Phe Met Lys

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				165					170					175	
Arg	Tyr	Pro	Lys	Gly	Gln	Pro	Glu	Leu	Gln	Lys	Pro	Phe	Lys	Tyr	Thr
			180					185					190		
Thr	Val	Thr	Lys	Arg	Ser	Arg	Arg	Ile	Arg	Pro	Thr	His	Pro	Ala	
			195				200					205			

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<210> 3
<211> 24
<212> DNA
<213> Artificial Sequence
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<220>
<223> oligonucleotide primer ZC11676

<400> 3
ggacttgact accgaagggtg totg 24

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<210> 4
<211> 23
<212> DNA
<213> Artificial Sequence
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<220>
<223> oligonucleotide primer ZC11677

<400> 4
gtcgatgtga gccgtaagca gct 23

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<210> 5
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer ZC12053
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<400> 5
gcataacttqt ccccatctct gcggcg 26

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<210> 6
<211> 621
<212> DNA
<213> Artificial Sequence

<220>
<223> degenerate sequence

<221> variation
<222> (1)...(621)
<223> n is any nucleotide
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cargtncarg	tnyngtngc	ngacgaraay	gtngayttym	gnathgaygt	ngaraarcar		120
acnmngncnm	gngaygaygt	nwsnmgnaar	carytnmngy	tntaycaryt	ntaywsnmgn		180
acnwsnggna	arcayathca	rgtntytngn	mgmgnathw	engcnmngc	ngargayggn		240
qayaartaayc	encarythnt	ngtngaracn	gyacnttyg	gnwsncargt	nmgnathaar		300

4

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ggnaargara cngarttyta yytnugyatg aaymgnaarg gnaarytngt nggnaarccn 360
gayggnaacnw snaargartg ygtnttyath garaargtny tngaraayaa ytayaacngcn 420
ytnatgwsng cnaartayws nggntgggtay gtngggnttya cnaaraargg nmgnccnmgn 480
aarggnccna aracnmnga raaycarcar gaygtncayt tyatgaarmg ntayccnaar 540
ggncarceng arytnccaraa rocnttyaar tayacnacng tnacnaarmg nwenmgnmgn 600
athmgncena cncayccngc n 621

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<210> 7
 <211> 47
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide primer ZC12652

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<400> 7
tatttatcta gactgggttcc gcgtgccgcc gaggagaacg tggactt 47

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<210> 8
 <211> 33
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide primer ZC12631

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<400> 8
gtatttgcg actcaggcag ggtgtgtggg ccg 33

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<210> 9
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide primer ZC15290

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<400> 9
gccgaggaga acgtggactt cc 22

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<210> 10
 <211> 47
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide primer ZC15270

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<400> 10
tatttatcta gagatgacga tgacaaggcc gaggagaacg tggactt 47

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<210> 11
 <211> 41
 <212> DNA
 <213> Artificial Sequence

<220>

5

<223> oligonucleotide primer ZC13497

<400> 11
agcattgcta aagaagaagg tgtaagcttg gacaagagag a 41

<210> 12
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer ZC15131

<400> 12
gggtgaagct tggacaagag agaggagaac gtggacttcc gcatccacgt ggagaaccag 60
acg 63

<210> 13
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer ZC15134

<400> 13
ccggctgtag agctggtaca gccgcagctg cttacggct 39

<210> 14
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer ZC13529

<400> 14
cttcagaagc ccttcaagta cacyacgggtg accaagaggt cc 42

<210> 15
<211> 61
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer ZC13525

<400> 15
acgacgggtga ccaagaggtc ccgacgggac cggccacac accctgccta gggggaattc 60
g 61

<210> 16
<211> 61
<212> DNA
<213> Artificial Sequence

<220>

6

<223> oligonucleotide primer ZC13526

<400> 16

caaacaggca gcctagaat actagtgtcg actcagaggat ccgaattccc cctaggcagg 60
g 61

<210> 17

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide primer ZC13528

<400> 17

ctcaaaaatt ataaaaatat ccaaacaggc agccctagaa tact 44

<210> 18

<211> 186

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide primer ZC15132

<400> 18

gtaccggagag cagttcccggt caatccctcc ccccttacac aggatgtcca tattaggaca 60
tctgcgtctc gagggcaccg tgggtgagcc cgacactcat tcataaaacg cttgttataa 120
aagcagtgggc tgcggcgccct cgtactccaa ccgcctctgc agcgagcaac tgagaagcca 180
aggatc 186

<210> 19

<211> 141

<212> DNA

<213> Artificial Sequence

<220>

<223> 5' linker sequence

<400> 19

agcattgtctg ctaaagaaga aggtgtaagc ttggacaaga gagaggagaa cgtggacttc 60
cgcctccacg tggagaacca gacgcggggt cgggacgatg tgagccgtaa gcagctgcgg 120
ctgtaccagc tctacagccg g 141

<210> 20

<211> 144

<212> DNA

<213> Artificial Sequence

<220>

<223> 3' linker sequence

<400> 20

cttcagaagc ccttcaagta cacgacgggtg accaagaggt cccgtcggat ccggcccaca 60
cacctgcct agggggaatt cggatccctcg agtcgacact agtattctag ggctgcctgt 120
ttggatattt ttataatttt tga 144

7

<210> 21
 <211> 243
 <212> PRT
 <213> Homo sapiens

<400> 21
 Met Ala Ala Ala Ile Ala Ser Ser Leu Ile Arg Gln Lys Arg Gln Ala
 1 5 10 15
 Arg Glu Ser Asn Ser Asp Arg Val Ser Ala Ser Lys Arg Arg Ser Ser
 20 25 30
 Pro Ser Lys Asp Gly Arg Ser Leu Cys Glu Arg His Val Leu Gly Val
 35 40 45
 Phe Ser Lys Val Arg Phe Cys Ser Gly Arg Lys Arg Pro Val Arg Arg
 50 55 60
 Arg Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Arg Leu Phe Ser Gln
 65 70 75 80
 Gln Gly Tyr Phe Leu Gln Met His Pro Asp Gly Thr Ile Asp Gly Thr
 85 90 95
 Lys Asp Glu Asn Ser Asp Tyr Thr Leu Phe Asn Leu Ile Pro Val Gly
 100 105 110
 Leu Arg Val Val Ala Ile Gln Gly Val Lys Ala Ser Leu Tyr Val Ala
 115 120 125
 Met Asn Gly Glu Gly Tyr Leu Tyr Ser Ser Asp Val Phe Thr Pro Glu
 130 135 140
 Cys Lys Phe Lys Glu Ser Val Phe Glu Asn Tyr Tyr Val Ile Tyr Ser
 145 150 155 160
 Ser Thr Leu Tyr Arg Gln Gln Glu Ser Gly Arg Ala Trp Phe Leu Gly
 165 170 175
 Leu Asn Lys Glu Gly Gln Ile Met Lys Gly Asn Arg Val Lys Lys Thr
 180 185 190
 Lys Pro Ser Ser His Phe Val Pro Lys Pro Ile Glu Val Cys Met Tyr
 195 200 205
 Arg Glu Pro Ser Leu His Glu Ile Gly Glu Lys Gln Gly Arg Ser Arg
 210 215 220
 Lys Ser Ser Gly Thr Pro Thr Met Asn Gly Gly Lys Val Val Asn Gln
 225 230 235 240
 Asp Ser Thr

<210> 22
 <211> 168
 <212> PRT
 <213> Homo sapiens

<400> 22
 Met Ala Ser Lys Glu Pro Gln Leu Lys Gly Ile Val Thr Arg Leu Phe
 1 5 10 15
 Ser Gln Gln Gly Tyr Phe Leu Gln Met His Pro Asp Gly Thr Ile Asp
 20 25 30
 Gly Thr Lys Asp Glu Asn Ser Asp Tyr Thr Leu Phe Asn Leu Ile Pro
 35 40 45
 Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys Ala Ser Leu Tyr
 50 55 60
 Val Ala Met Asn Gly Glu Gly Tyr Leu Tyr Ser Ser Asp Val Phe Thr
 65 70 75 80
 Pro Glu Cys Lys Phe Lys Glu Ser Val Phe Glu Asn Tyr Tyr Val Ile
 85 90 95

8

Tyr Ser Ser Thr Leu Tyr Arg Gln Gln Glu Ser Gly Arg Ala Trp Phe
 100 105 110
 Leu Gly Leu Asn Lys Glu Gly Gln Ile Met Lys Gly Asn Arg Val Glu
 115 120 125
 Lys Thr Lys Pro Ser Ser His Phe Val Pro Lys Pro Ile Glu Val Cys
 130 135 140
 Met Tyr Arg Glu Pro Ser Leu His Glu Ile Gly Glu Asn Lys Gly Val
 145 150 155 160
 Gln Gly Lys Phe Trp Thr Pro Pro
 165

<210> 23
 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 23
 Met Ala Ala Ala Ile Ala Ser Gly Leu Ile Arg Gln Lys Arg Gln Ala
 1 5 10 15
 Arg Glu Gln His Trp Asp Arg Pro Ser Ala Ser Arg Arg Arg Ser Ser
 20 25 30
 Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val Asp Ile Phe
 35 40 45
 Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg Leu Arg Arg Gln
 50 55 60
 Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu Tyr Cys Arg Gln Gly
 65 70 75 80
 Tyr Tyr Leu Gln Met His Pro Asp Gly Ala Leu Asp Gly Thr Lys Asp
 85 90 95
 Asp Ser Thr Asn Ser Thr Leu Phe Asn Leu Ile Pro Val Gly Leu Arg
 100 105 110
 Val Val Ala Ile Gln Gly Val Lys Thr Gly Leu Tyr Ile Ala Met Asn
 115 120 125
 Gly Glu Gly Tyr Leu Tyr Pro Ser Glu Leu Phe Thr Pro Glu Cys Lys
 130 135 140
 Phe Lys Glu Ser Val Phe Glu Asn Tyr Tyr Val Ile Tyr Ser Ser Met
 145 150 155 160
 Leu Tyr Arg Gln Gln Glu Ser Gly Arg Ala Trp Phe Leu Gly Leu Asn
 165 170 175
 Lys Glu Gly Gln Ala Met Lys Gly Asn Arg Val Lys Lys Thr Lys Pro
 180 185 190
 Ala Ala His Phe Leu Pro Lys Pro Leu Glu Val Ala Met Tyr Arg Glu
 195 200 205
 Pro Ser Leu His Asp Val Gly Glu Thr Val Pro Lys Pro Gly Val Thr
 210 215 220
 Pro Ser Lys Ser Thr Ser Ala Ser Ala Ile Met Asn Gly Gly Lys Pro
 225 230 235 240
 Val Asn Lys Ser Lys Thr Thr
 245

<210> 24
 <211> 245
 <212> PRT
 <213> Homo sapiens

<400> 24
 Met Ala Ala Ala Ile Ala Ser Ser Leu Ile Arg Gln Lys Arg Gln Ala

9

1		5		10		15
Arg	Glu	Arg	Glu	Lys	Ser	Asn
		20		25		30
Lys	Gly	Lys	Thr	Ser	Cys	Asp
		35		40		45
Val	Lys	Leu	Phe	Gly	Ser	Lys
		50		55		60
Gln	Leu	Lys	Gly	Ile	Val	Thr
		65		70		75
Leu	Gln	Leu	Gln	Ala	Asp	Gly
				85		90
Ser	Thr	Tyr	Thr	Leu	Phe	Asn
				100		105
Ala	Ile	Gln	Gly	Val	Gln	Thr
		115		120		125
Gly	Tyr	Leu	Tyr	Thr	Ser	Glu
		130		135		140
Glu	Ser	Val	Phe	Glu	Asn	Tyr
				145		150
Arg	Gln	Gln	Gln	Ser	Gly	Arg
				155		160
Gly	Glu	Ile	Met	Lys	Gly	Asn
				165		170
His	Phe	Leu	Pro	Lys	Pro	Leu
				175		180
Leu	His	Asp	Leu	Thr	Glu	Phe
				185		190
Lys	Ser	Arg	Ser	Val	Ser	Gly
				195		200
His	Asn	Glu	Ser	Thr		
				205		210
				215		220
				225		230
				235		240
				245		

<210> 25
 <211> 225
 <212> PRT
 <213> Homo sapiens

 <400> 25

10

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Met Ala Ala Leu Ala Ser Ser Leu Ile Arg Gln Lys Arg Glu Val Arg
 1      5      10      15
Glu Pro Gly Gly Ser Arg Pro Val Ser Ala Gln Arg Arg Val Cys Pro
 20      25      30
Arg Gly Thr Lys Ser Leu Cys Gln Lys Gln Leu Leu Ile Leu Leu Ser
 35      40      45
Lys Val Arg Leu Cys Gly Gly Arg Pro Ala Arg Pro Asp Arg Gly Pro
 50      55      60
Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu Phe Cys Arg Gln Gly
 65      70      75      80
Phe Tyr Leu Gln Ala Asn Pro Asp Gly Ser Ile Gln Gly Thr Pro Glu
 85      90      95
Asp Thr Ser Ser Phe Thr His Phe Asn Leu Ile Pro Val Gly Leu Arg
100      105      110
Val Val Thr Ile Gln Ser Ala Lys Leu Gly His Tyr Met Ala Met Asn
115      120      125
Ala Glu Gly Leu Leu Tyr Ser Ser Pro His Phe Thr Ala Glu Cys Arg
130      135      140
Phe Lys Glu Cys Val Phe Glu Asn Tyr Tyr Val Leu Tyr Ala Ser Ala
145      150      155      160
Leu Tyr Arg Gln Arg Arg Ser Gly Arg Ala Trp Tyr Leu Gly Leu Asp
165      170      175
Lys Glu Gly Gln Val Met Lys Gly Asn Arg Val Lys Lys Thr Lys Ala
180      185      190
Ala Ala His Phe Leu Pro Lys Leu Leu Glu Val Ala Met Tyr Gln Glu
195      200      205
Pro Ser Leu His Ser Val Pro Glu Ala Ser Pro Ser Ser Pro Pro Ala
210      215      220
Pro
225

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<210> 26
<211> 206
<212> PRT
<213> Homo sapiens

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<400> 26
Met Ser Gly Pro Gly Thr Ala Ala Val Ala Leu Leu Pro Ala Val Leu
 1      5      10      15
Leu Ala Leu Leu Ala Pro Trp Ala Gly Arg Gly Gly Ala Ala Pro
 20      25      30
Thr Ala Pro Asn Gly Thr Leu Glu Ala Glu Leu Glu Arg Arg Trp Glu
 35      40      45
Ser Leu Val Ala Leu Ser Leu Ala Arg Leu Pro Val Ala Ala Gln Pro
 50      55      60
Lys Glu Ala Ala Val Gln Ser Gly Ala Gly Asp Tyr Leu Leu Gly Ile
 65      70      75      80
Lys Arg Leu Arg Arg Leu Tyr Cys Asn Val Gly Ile Gly Phe His Leu
 85      90      95
Gln Ala Leu Pro Asp Gly Arg Ile Gly Gly Ala His Ala Asp Thr Arg
100      105      110
Asp Ser Leu Leu Glu Leu Ser Pro Val Glu Arg Gly Val Val Ser Ile
115      120      125
Phe Gly Val Ala Ser Arg Phe Phe Val Ala Met Ser Ser Lys Gly Lys
130      135      140
Leu Tyr Gly Ser Pro Phe Phe Thr Asp Glu Cys Thr Phe Lys Glu Ile
145      150      155      160

```

11

Leu Leu Pro Asn Asn Tyr Asn Ala Tyr Glu Ser Tyr Lys Tyr Pro Gly
 165 170 175
 Met Phe Ile Ala Leu Ser Lys Asn Gly Lys Thr Lys Lys Gly Asn Arg
 180 185 190
 Val Ser Pro Thr Met Lys Val Thr His Phe Leu Pro Arg Leu
 195 200 205

<210> 27
 <211> 208
 <212> PRT
 <213> Homo sapiens

<400> 27
 Met Ala Leu Gly Gln Lys Leu Phe Ile Thr Met Ser Arg Gly Ala Gly
 1 5 10 15
 Arg Leu Gln Gly Thr Leu Trp Ala Leu Val Phe Leu Gly Ile Leu Val
 20 25 30
 Gly Met Val Val Pro Ser Pro Ala Gly Thr Arg Ala Asn Asn Thr Leu
 35 40 45
 Leu Asp Ser Arg Gly Trp Gly Thr Leu Leu Ser Arg Ser Arg Ala Gly
 50 55 60
 Leu Ala Gly Glu Ile Ala Gly Val Asn Trp Glu Ser Gly Tyr Leu Val
 65 70 75 80
 Gly Ile Lys Arg Gln Arg Arg Leu Tyr Cys Asn Val Gly Ile Gly Phe
 85 90 95
 His Leu Gln Val Leu Pro Asp Gly Arg Ile Ser Gly Thr His Glu Glu
 100 105 110
 Asn Pro Tyr Ser Leu Leu Glu Ile Ser Thr Val Glu Arg Gly Val Val
 115 120 125
 Ser Leu Phe Gly Val Arg Ser Ala Leu Phe Val Ala Met Asn Ser Lys
 130 135 140
 Gly Arg Leu Tyr Ala Thr Pro Ser Phe Gln Glu Glu Cys Lys Phe Arg
 145 150 155 160
 Glu Thr Leu Leu Pro Asn Asn Tyr Asn Ala Tyr Glu Ser Asp Leu Tyr
 165 170 175
 Gln Gly Thr Tyr Ile Ala Leu Ser Lys Tyr Gly Arg Val Lys Arg Gly
 180 185 190
 Ser Lys Val Ser Pro Ile Met Thr Val Thr His Phe Leu Pro Arg Ile
 195 200 205

<210> 28
 <211> 155
 <212> PRT
 <213> Homo sapiens

<400> 28
 Met Ala Ala Gly Ser Ile Thr Thr Leu Pro Ala Leu Pro Glu Asp Gly
 1 5 10 15
 Gly Ser Gly Ala Phe Pro Pro Gly His Phe Lys Asp Pro Lys Arg Leu
 20 25 30
 Tyr Cys Lys Asn Gly Gly Phe Phe Leu Arg Ile His Pro Asp Gly Arg
 35 40 45
 Val Asp Gly Val Arg Glu Lys Ser Asp Pro His Ile Lys Leu Gln Leu
 50 55 60
 Gln Ala Glu Glu Arg Gly Val Val Ser Ile Lys Gly Val Cys Ala Asn
 65 70 75 80
 Arg Tyr Leu Ala Met Lys Glu Asp Gly Arg Leu Leu Ala Ser Lys Cys

12

				85				90					95		
Val	Thr	Asp	Glu	Cys	Phe	Phe	Phe	Glu	Arg	Leu	Glu	Ser	Asn	Asn	Tyr
			100					105					110		
Asn	Thr	Tyr	Arg	Ser	Arg	Lys	Tyr	Thr	Ser	Trp	Tyr	Val	Ala	Leu	Lys
			115				120					125			
Arg	Thr	Gly	Gln	Tyr	Lys	Leu	Gly	Ser	Lys	Thr	Gly	Pro	Gly	Gln	Lys
			130			135					140				
Ala	Ile	Leu	Phe	Leu	Pro	Met	Ser	Ala	Lys	Ser					
145					150					155					

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<210> 29
<211> 155
<212> PRT
<213> Homo sapiens
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```

      <400> 29
Met Ala Glu Gly Glu Ile Thr Thr Phe Thr Ala Leu Thr Glu Lys Phe
  1                               5          10          15
Asn Leu Pro Pro Gly Asn Tyr Lys Lys Pro Lys Leu Leu Tyr Cys Ser
      20          25          30

```

13

Asn Gly Gly His Phe Leu Arg Ile Leu Pro Asp Gly Thr Val Asp Gly
 35 40 45
 Thr Arg Asp Arg Ser Asp Gln His Ile Gln Leu Gln Leu Ser Ala Glu
 50 55 60
 Ser Val Gly Glu Val Tyr Ile Lys Ser Thr Glu Thr Gly Gln Tyr Leu
 65 70 75 80
 Ala Met Asp Thr Asp Gly Leu Leu Tyr Gly Ser Gln Thr Pro Asn Glu
 85 90 95
 Glu Cys Leu Phe Leu Glu Arg Leu Glu Glu Asn His Tyr Asn Thr Tyr
 100 105 110
 Ile Ser Lys Lys His Ala Glu Lys Asn Trp Phe Val Gly Leu Lys Lys
 115 120 125
 Asn Gly Ser Cys Lys Arg Gly Pro Arg Thr His Tyr Gly Gln Lys Ala
 130 135 140
 Ile Leu Phe Leu Pro Leu Pro Val Ser Ser Asp
 145 150 155

<210> 30
 <211> 208
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Trp Lys Trp Ile Leu Thr His Cys Ala Ser Ala Phe Pro His Leu
 1 5 10 15
 Pro Gly Cys Cys Cys Cys Cys Phe Leu Leu Phe Leu Val Ser Ser
 20 25 30
 Val Pro Val Thr Cys Gln Ala Leu Gly Gln Asp Met Val Ser Pro Glu
 35 40 45
 Ala Thr Asn Ser Ser Ser Ser Ser Phe Ser Ser Pro Ser Ser Ala Gly
 50 55 60
 Arg His Val Arg Ser Tyr Asn His Leu Gln Gly Asp Val Arg Trp Arg
 65 70 75 80
 Lys Leu Phe Ser Phe Thr Lys Tyr Phe Leu Lys Ile Glu Lys Asn Gly
 85 90 95
 Lys Val Ser Gly Thr Lys Lys Glu Asn Cys Pro Tyr Ser Ile Leu Glu
 100 105 110
 Ile Thr Ser Val Glu Ile Gly Val Val Ala Val Lys Ala Ile Asn Ser
 115 120 125
 Asn Tyr Tyr Leu Ala Met Asn Lys Lys Gly Lys Leu Tyr Gly Ser Lys
 130 135 140
 Glu Phe Asn Asn Asp Cys Lys Leu Lys Glu Arg Ile Glu Glu Asn Gly
 145 150 155 160
 Tyr Asn Thr Tyr Ala Ser Phe Asn Trp Gln His Asn Gly Arg Gln Met
 165 170 175
 Tyr Val Ala Leu Asn Gly Lys Gly Ala Pro Arg Arg Gly Gln Lys Thr
 180 185 190
 Arg Arg Lys Asn Thr Ser Ala His Phe Leu Pro Met Val Val His Ser
 195 200 205

<210> 31
 <211> 194
 <212> PRT
 <213> Homo sapiens

<400> 31
 Met His Lys Trp Ile Leu Thr Trp Ile Leu Pro Thr Leu Leu Tyr Arg

14

1	5	10	15
Ser Cys Phe His Ile Ile Cys Leu Val Gly Thr Ile Ser Leu Ala Cys			
20	25	30	
Asn Asp Met Thr Pro Glu Gln Met Ala Thr Asn Val Asn Cys Ser Ser			
35	40	45	
Pro Glu Arg His Thr Arg Ser Tyr Asp Tyr Met Glu Gly Gly Asp Ile			
50	55	60	
Arg Val Arg Arg Leu Phe Cys Arg Thr Gln Trp Tyr Leu Arg Ile Asp			
65	70	75	80
Lys Arg Gly Lys Val Lys Gly Thr Gln Glu Met Lys Asn Asn Tyr Asn			
85	90	95	
Ile Met Glu Ile Arg Thr Val Ala Val Gly Ile Val Ala Ile Lys Gly			
100	105	110	
Val Glu Ser Glu Phe Tyr Leu Ala Met Asn Lys Glu Gly Lys Leu Tyr			
115	120	125	
Ala Lys Lys Glu Cys Asn Glu Asp Cys Asn Phe Lys Glu Leu Ile Leu			
130	135	140	
Glu Asn His Tyr Asn Thr Tyr Ala Ser Ala Lys Trp Thr His Asn Gly			
145	150	155	160
Gly Glu Met Phe Val Ala Leu Asn Gln Lys Gly Ile Pro Val Arg Gly			
165	170	175	
Lys Lys Thr Lys Lys Glu Gln Lys Thr Ala His Phe Leu Pro Met Ala			
180	185	190	
Ile Thr			

<210> 32
 <211> 233
 <212> PRT
 <213> Homo sapiens
 <400> 32

15

Met Gly Ser Pro Arg Ser Ala Leu Ser Cys Leu Leu Leu His Leu Leu
 1 5 10 15
 Val Leu Cys Leu Gln Ala Gln Glu Gly Pro Gly Arg Gly Pro Ala Leu
 20 25 30
 Gly Arg Glu Leu Ala Ser Leu Phe Arg Ala Gly Arg Glu Pro Gln Gly
 35 40 45
 Val Ser Gln Gln His Val Arg Glu Gln Ser Leu Val Thr Asp Gln Leu
 50 55 60
 Ser Arg Arg Leu Ile Arg Thr Tyr Gln Leu Tyr Ser Arg Thr Ser Gly
 65 70 75 80
 Lys His Val Gln Val Leu Ala Asn Lys Arg Ile Asn Ala Met Ala Glu
 85 90 95
 Asp Gly Asp Pro Phe Ala Lys Leu Ile Val Glu Thr Asp Thr Phe Gly
 100 105 110
 Ser Arg Val Arg Val Arg Gly Ala Glu Thr Gly Leu Tyr Ile Cys Met
 115 120 125
 Asn Lys Lys Gly Lys Leu Ile Ala Lys Ser Asn Gly Lys Gly Lys Asp
 130 135 140
 Cys Val Phe Thr Glu Ile Val Leu Glu Asn Asn Tyr Thr Ala Leu Gln
 145 150 155 160
 Asn Ala Lys Tyr Glu Gly Trp Tyr Met Ala Phe Thr Arg Lys Gly Arg
 165 170 175
 Pro Arg Lys Gly Ser Lys Thr Arg Gln His Gln Arg Glu Val His Phe
 180 185 190
 Met Lys Arg Leu Pro Arg Gly His His Thr Thr Glu Gln Ser Leu Arg
 195 200 205
 Phe Glu Phe Leu Asn Tyr Pro Pro Phe Thr Arg Ser Leu Arg Gly Ser
 210 215 220
 Gln Arg Thr Trp Ala Pro Glu Pro Arg
 225 230

<210> 33
 <211> 268
 <212> PRT
 <213> Homo sapiens

<400> 33
 Met Ser Leu Ser Phe Leu Leu Leu Leu Phe Phe Ser His Leu Ile Leu
 1 5 10 15
 Ser Ala Trp Ala His Gly Glu Lys Arg Leu Ala Pro Lys Gly Gln Pro
 20 25 30
 Gly Pro Ala Ala Thr Asp Arg Asn Pro Ile Gly Ser Ser Ser Arg Gln
 35 40 45
 Ser Ser Ser Ser Ala Met Ser Ser Ser Ala Ser Ser Ser Pro Ala
 50 55 60
 Ala Ser Leu Gly Ser Gln Gly Ser Gly Leu Glu Gln Ser Ser Phe Gln
 65 70 75 80
 Trp Ser Pro Ser Gly Arg Arg Thr Gly Ser Leu Tyr Cys Arg Val Gly
 85 90 95
 Ile Gly Phe His Leu Gln Ile Tyr Pro Asp Gly Lys Val Asn Gly Ser
 100 105 110
 His Glu Ala Asn Met Leu Ser Val Leu Glu Ile Phe Ala Val Ser Gln
 115 120 125
 Gly Ile Val Gly Ile Arg Gly Val Phe Ser Asn Lys Phe Leu Ala Met
 130 135 140
 Ser Lys Lys Gly Lys Leu His Ala Ser Ala Lys Phe Thr Asp Asp Cys
 145 150 155 160

16

Lys Phe Arg Glu Arg Phe Gln Glu Asn Ser Tyr Asn Thr Tyr Ala Ser
 165 170 175
 Ala Ile His Arg Thr Glu Lys Thr Gly Arg Glu Trp Tyr Val Ala Leu
 180 185 190
 Asn Lys Arg Gly Lys Ala Lys Arg Gly Cys Ser Pro Arg Val Lys Pro
 195 200 205
 Gln His Ile Ser Thr His Phe Leu Pro Arg Phe Lys Gln Ser Glu Gln
 210 215 220
 Pro Glu Leu Ser Phe Thr Val Thr Val Pro Glu Lys Lys Asn Pro Pro
 225 230 235 240
 Ser Pro Ile Lys Ser Lys Ile Pro Leu Ser Ala Pro Arg Lys Asn Thr
 245 250 255
 Asn Ser Val Lys Tyr Arg Leu Lys Phe Arg Phe Gly
 260 265

<210> 34
 <211> 208
 <212> PRT
 <213> Homo sapiens

<400> 34
 Met Ala Pro Leu Gly Glu Val Gly Asn Tyr Phe Gly Val Gln Asp Ala
 1 5 10 15
 Val Pro Phe Gly Asn Val Pro Val Leu Pro Val Asp Ser Pro Val Leu
 20 25 30
 Leu Ser Asp His Leu Gly Gln Ser Glu Ala Gly Gly Leu Pro Arg Gly
 35 40 45
 Pro Ala Val Thr Asp Leu Asp His Leu Lys Gly Ile Leu Arg Arg Arg
 50 55 60
 Gln Leu Tyr Cys Arg Thr Gly Phe His Leu Glu Ile Phe Pro Asn Gly
 65 70 75 80
 Thr Ile Gln Gly Thr Arg Lys Asp His Ser Arg Phe Gly Ile Leu Glu
 85 90 95
 Phe Ile Ser Ile Ala Val Gly Leu Val Ser Ile Arg Gly Val Asp Ser
 100 105 110
 Gly Leu Tyr Leu Gly Met Asn Glu Lys Gly Glu Leu Tyr Gly Ser Glu
 115 120 125
 Lys Leu Thr Gln Glu Cys Val Phe Arg Glu Gln Phe Glu Glu Asn Trp
 130 135 140
 Tyr Asn Thr Tyr Ser Ser Asn Leu Tyr Lys His Val Asp Thr Gly Arg
 145 150 155 160
 Arg Tyr Tyr Val Ala Leu Asn Lys Asp Gly Thr Pro Arg Glu Gly Thr
 165 170 175
 Arg Thr Lys Arg His Gln Lys Phe Thr His Phe Leu Pro Arg Pro Val
 180 185 190
 Asp Pro Asp Lys Val Pro Glu Leu Tyr Lys Asp Ile Leu Ser Gln Ser
 195 200 205

<210> 35
 <211> 239
 <212> PRT
 <213> Homo sapiens

<400> 35
 Met Gly Leu Ile Trp Leu Leu Leu Leu Ser Leu Leu Glu Pro Gly Trp
 1 5 10 15
 Pro Ala Ala Gly Pro Gly Ala Arg Leu Arg Arg Asp Ala Gly Gly Arg

17

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      20      25      30
Gly Gly Val Tyr Glu His Leu Gly Gly Ala Pro Arg Arg Arg Lys Leu
      35      40      45
Tyr Cys Ala Thr Lys Tyr His Leu Gln Leu His Pro Ser Gly Arg Val
      50      55      60
Asn Gly Ser Leu Glu Asn Ser Ala Tyr Ser Ile Leu Glu Ile Thr Ala
65      70      75      80
Val Glu Val Gly Ile Val Ala Ile Arg Gly Leu Phe Ser Gly Arg Tyr
      85      90      95
Leu Ala Met Asn Lys Arg Gly Arg Leu Tyr Ala Ser Glu His Tyr Ser
      100      105      110
Ala Glu Cys Glu Phe Val Glu Arg Ile His Glu Leu Gly Tyr Asn Thr
      115      120      125
Tyr Ala Ser Arg Leu Tyr Arg Thr Val Ser Ser Thr Pro Gly Ala Arg
      130      135      140
Arg Gln Pro Ser Ala Glu Arg Leu Trp Tyr Val Ser Val Asn Gly Lys
145      150      155      160
Gly Arg Pro Arg Arg Gly Phe Lys Thr Arg Arg Thr Gln Lys Ser Ser
      165      170      175
Leu Phe Leu Pro Arg Val Leu Asp His Arg Asp His Glu Met Val Arg
      180      185      190
Gln Leu Gln Ser Gly Leu Pro Arg Pro Pro Gly Lys Gly Val Gln Pro
      195      200      205
Arg Arg Arg Arg Gln Lys Gln Ser Pro Asp Asn Leu Glu Pro Ser His
      210      215      220
Val Gln Ala Ser Arg Leu Gly Ser Gln Leu Glu Ala Ser Ala His
225      230      235

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<210> 36
<211> 11
<212> PRT
<213> Artificial Sequence

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<220>
<223> FGF family motif

<221> VARIANT
<222> (1)...(11)
<223> Xaa is any amino acid

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      <400> 36
Cys Xaa Phe Xaa Glu Glu Glu Glu Glu Tyr
 1              5              10

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